

800 ON YOUR DIAL

WMIT

THE TECHNOLOGY BROADCASTING SYSTEM

3 AMES STREET • CAMBRIDGE 39, MASSACHUSETTS • KIRKLAND 7-5300

May 29, 1948

Miss Eleanor Echikson
Gillett House
Smith College
Northampton, Mass.

Dear Eleanor,

Your request for information about our radio station was turned over to me by Dave Kemper. Dave is in a cooperative course here at Tech and is spending this term with the Bell System.

We do not have any printed material concerning the equipment and operation of the station, but I will be glad to tell you what I can about it. We are, in fact, just getting on our feet now, WMIT having been organized in November, 1946. Over the summer we intend to install a complete new audio system which is presently being constructed. Our transmission facilities are far from complete, but we hope to eventually cover the entire campus, including the thirty fraternities across the river.

Our studios are in the basement of the Senior House, together with our transmitter and all other technical apparatus. Our transmitter is home-made and delivers about forty watts. Coupling for the Senior House consists of connection to the AC power line thru capacitors. Our transmission line, a shielded twisted pair, carries the RF several hundred feet to the two main dormitory buildings where it is also coupled to the power lines. This line also runs a considerable distance to the barracks dormitory and Graduate House. Because of the length of these lines, it is necessary to install RF amplifiers to boost the signal. Nearly satisfactory reception is obtained from this system, although the presence of nodes and the changing reactance of the power line lead to low signal strengths in several places. We intend to try to remedy this next fall, perhaps by radiating from the plumbing system. It would be impossible to give you the cost of this installation because we have constructed all of it ourselves, with many of the parts being contributed by the labs. It seems to me that the choice is between a system such as ours or one where audio is carried over lines to the individual dorms, each of which has its own transmitter.

The organization of the Technical Department is quite simple. Under the Technical Manager is a Control Director, a Maintenance Director, and a Field Engineering Director. The Control Director supervises the work of the control engineers, instructing them, scheduling them, and seeing that the program is as technically perfect as possible. The Maintenance Director supervises his engineers

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work of repairing existing equipment and developing the new. The Field Engineering Director and his staff provide for the special events broadcasts which include the basketball games at Tech, music from the dances, and special recordings.

Considering actual on-the-air operation, we, for the most part, imitate commercial stations. The engineer on duty spins the records, rides the audio gain, and looks after the transmitter. He does not give the cues as there is usually a production director present. We have found that it is better for the announcer to switch the mikes on and off. This is done by a set of push buttons, duplicated in the control room, which operate the microphone relays. This eliminates much of the confusion of having the announcer ready and no mike, and having the mike on with the announcer not prepared.

As I said before, it is difficult to advise you because of our limited experience and because we have constructed most of our equipment, which you probably won't do. If you should meet any specific problems in which we could assist you in solving, please feel free to call on us at any time.

Sincerely,

Clifford Abrahamson
Clifford Abrahamson

